



**Fiscal Year 2008**

**Contractor Performance Evaluation and  
Measurement Plan**

**for**

***Management and Operations of the  
SLAC National Accelerator Laboratory***



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## INTRODUCTION

This document, the Performance Evaluation and Measurement Plan (PEMP) primarily serves as DOE's Quality Assurance/Surveillance Plan (QASP) for the evaluation of *Stanford University* (hereafter referred to as "the Contractor") performance regarding the management and operations of the *SLAC National Accelerator Laboratory* (hereafter referred to as "the Laboratory") for the evaluation period from October 1, 2007, through September 30, 2008. The performance evaluation provides a standard by which to determine whether the Contractor is managerially and operationally in control of the Laboratory and is meeting the mission requirements and performance expectations/objectives of the Department as stipulated within the contract.

The Performance Goals (hereafter referred to as Goals), Performance Objectives (hereafter referred to as Objectives) and set of Performance Measures and Targets (hereafter referred to as Measures/Targets) for each Objective discussed herein were developed in accordance with contract expectations set forth within the contract. The Performance Measures for meeting the Objectives set forth within this plan have been developed in coordination with HQ program offices as appropriate. Except as otherwise provided for within the contract, the evaluation will rest solely on the Contractor's performance within the Performance Goals and Objectives set forth within this plan.

The overall performance against each Objective of this performance plan, to include the evaluation of Performance Measures identified for each Objective, shall be evaluated jointly by the appropriate HQ office or major customer and the SLAC Site Office (SSO). This cooperative review methodology will ensure that the overall evaluation of the Contractor results in a consolidated DOE position taking into account specific Performance Measures as well as all additional information not otherwise identified via specific Performance Measures. The Site Office shall work closely with each HQ program office or major customer throughout the year in evaluating the Contractor's performance and will provide observations regarding programs and projects as well as other management and operation activities conducted by the Contractor throughout the year.

Section I provides information on how the performance rating (grade) for the Contractor will be determined.

Section II provides the detailed information concerning each Goal, their corresponding Objectives, and Performance Measures of performance identified, along with the weightings assigned to each Goal and Objective and a table for calculating the final score for each Goal.

## I. DETERMINING THE CONTRACTOR'S PERFORMANCE RATING

The FY08 Contractor performance grades for each Goal will be determined based on the weighted sum of the individual scores earned for each of the Objectives described within this document for Science and Technology and for Management and Operations. No overall rollup grade will be provided. The rollup of the performance of each Goal will then be utilized to determine the Contractor performance score for Science and Technology and Management and Operations (see Table A). Each Goal is composed of two or more weighted Objectives, and each Objective has a set of Performance Measures, which are identified to assist the reviewer in determining the Contractor's overall performance in meeting that Objective. Each of the Performance Measures identifies significant activities, requirements and/or milestones important to the success of the corresponding Objective and shall be utilized as the primary means of determine the Contractor's success in meeting the Objective. Although the Performance Measures are the primary means for determining performance, other performance information available to the evaluating office from other sources to include, but not limited to, the Contractor's self-evaluation report, operational awareness (daily oversight) activities; "For Cause" reviews (if any); and other outside agency reviews (OIG, GAO, DCAA, etc.) may be utilized in determining the Contractor's overall success in meeting an Objective. The following describes the methodology for determining the Contractor's grade for each Goal:

### Performance Evaluation Methodology

The purpose of this section is to establish a methodology to develop scoring at the Objective Level. Each Objective within a Goal shall be assigned a numerical score, per Figure I-1, by the evaluating office. Each evaluation will measure the degree of effectiveness and performance of the Contractor in meeting the Objective and shall be based on the Contractor's success in meeting the set of Performance Measures identified for each Objective as well as other performance information available to the evaluating office from other sources as identified above. The set of Performance Measures identified for each Objective represent the set of significant indicators that if fully met, collectively places performance for the Objective in the "B+" grade range. For some targets, it serves the evaluator

to provide additional grading details “for example at the A, C+, and D level” and in those cases details have been included in the PEMP. However, these should be considered as guidelines that do not restrict the evaluation from considering other factors that contribute to the evaluation.

Letter Grade	Numeric Grade	Definition
A+	4.3 – 4.1	Significantly exceeds expectations of performance as set within performance measures identified for each Objective or within other areas within the purview of the Objective. Areas of notable performance have or have the potential to significantly improve the overall mission of the Laboratory. No specific deficiency noted within the purview of the overall Objective being evaluated.
A	4.0 – 3.8	Notably exceeds expectations of performance as set within performance measures identified for each Objective or within other areas within the purview of the Objective. Areas of notable performance either have or have the potential to improve the overall mission of the Laboratory. Minor deficiencies noted are more than offset by the positive performance within the purview of the overall Objective being evaluated and have no potential to adversely impact the mission of the Laboratory.
A-	3.7 – 3.5	Meets expectations of performance as set within performance measures identified for each Objective with some notable areas of increased performance identified. Deficiencies noted are offset by the positive performance within the purview of the overall Objective being evaluated with little or no potential to adversely impact the mission of the Laboratory.
B+	3.4 – 3.1	Meets expectations of performance as set by the performance measures identified for each Objective with no notable areas of increased or diminished performance identified. Deficiencies identified are offset by positive performance and have little to no potential to adversely impact the mission of the Laboratory.
B	3.0 – 2.8	Most expectations of performance as set by the performance measures identified for each Objective are met and/or other minor deficiencies are identified. Performance measures or other minor deficiencies identified are offset by positive performance within the purview of the Objective and have little to no potential to adversely impact the mission of the Laboratory.
B-	2.7 – 2.5	One or two expectations of performance set by the performance measures are not met and/or other deficiencies are identified and although they may be offset by other positive performance, they may have the potential to negatively impact the Objective or overall Laboratory mission accomplishment.
C+	2.4 – 2.1	Some expectations of performance set by the performance measures are not met and/or other minor deficiencies are identified and although they may be offset by other positive performance, they may have the potential to negatively impact the Objective or overall Laboratory mission accomplishment.
C	2.0 – 1.8	A number of expectations as set by the performance measures are not met and/or a number of other deficiencies are identified and although they may be somewhat offset by other positive performance, they have the potential to negatively impact the Objective or overall Laboratory mission accomplishment.
C-	1.7 – 1.1	Most expectations as set by the performance measures are not met and/or other major deficiencies are identified which have or will



Letter Grade	Numeric Grade	Definition
		negatively impact the Objective or overall Laboratory mission accomplishment if not immediately corrected.
D	1.0 – 0.8	Most or all expectations as set by the performance measures are not met and/or other significant deficiencies are identified which have negatively impacted the Objective and/or overall Laboratory mission accomplishment.
F	0.7 – 0	All expectations as set by the performance measures are not met and/or other significant deficiencies are identified which have significantly impacted both the Objective and the accomplishment of the Laboratory mission.

**Figure I-1 Letter Grade and Numerical Score Definitions**

**Calculating Individual Goal Scores and Letter Grade:**

Each Objective is assigned the earned numerical score by the evaluating office as stated above. The Goal rating is then computed by multiplying the numerical score by the weight of each Objective within a Goal. These values are then added together to develop an overall score for each Goal. A set of tables is provided at the end of each Performance Goal section of this document to assist in the calculation of Objective scores to the Goal score. Utilizing Table A, the scores for each of the Science and Technology (S&T) Goals and Management and Operations (M&O) Goals are then multiplied by the weight assigned and these are summed to provide an overall score for each. The total score for Science and Technology and Management and Operations is compared to the letter grade scale found in Table B, to determine the overall S&T and M&O grades for FY 2008.

The raw score from each calculation shall be carried through to the next stage of the calculation process.

S&T Performance Goal	Numerical Score	Letter Grade	Weight	Weighted Score	Total Score
1.0 Mission Accomplishment	3.8	A	24%	0.91	
2.0 Construction and Operations of User Research Facilities and Equipment	3.6	A-	56%	2.02	
3.0 Science and Technology Research Project/Program Management	3.4	B+	20%	0.68	
Total Score					3.6
M&O Performance Goal	Numerical Score	Letter Grade	Weight	Weighted Score	Total Score
4.0 Leadership and Stewardship of the Laboratory	3.7	A-	25%	0.93	
5.0 Integrated Safety, Health, and Environmental Protection	3.0	B	20%	0.60	
6.0 Business Systems	2.6	B-	25%	0.65	
7.0 Operating, Maintaining, and Renewing Facility and Infrastructure Portfolio	3.3	B+	15%	0.50	
8.0 Integrated Safeguards and Security Management and Emergency Management Systems	2.8	B	15%	0.42	
Total Score					3.1

**Table A. FY 2008 Contractor Evaluation Score Calculation**

Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0

Table B. FY 2008 Contractor Letter Grade Scale/Numeric Score Scale

#### Adjustment to the Letter Grade:

The lack of performance objectives and measures in this plan do not diminish the need to comply with minimum contractual requirements. Although the performance-based Goals and their corresponding Objectives shall be the primary means utilized in determining the Contractor's performance grade, the Contracting Officer may unilaterally adjust the rating based on the Contractor's performance against all contract requirements as set forth in the contract. Data to support rating adjustments may be derived from other sources to include, but not limited to, operational awareness (daily oversight) activities; "For Cause" reviews (if any); and other outside agency reviews (OIG, GAO, DCAA, etc.).

The final Contractor performance-based grade for each Goal will be contained within a year-end report, documenting the results from the DOE review. The report will identify areas where performance improvement is necessary and, if required, provide the basis for any performance-based rating adjustments made from the otherwise earned rating based on Performance Goal achievements.

## II. PERFORMANCE GOALS, OBJECTIVES & PERFORMANCE MEASURES

### Background

The current performance-based management approach to oversight within DOE has established a new culture within the Department with emphasis on the customer-supplier partnership between DOE and the laboratory contractors. It has also placed a greater focus on mission performance, best business practices, cost management, and improved contractor accountability. Under the performance-based management system the DOE provides clear direction to the laboratories and develops annual performance plans (such as this one) to assess the contractors performance in meeting that direction in accordance with contract requirements. The DOE policy for implementing performance-based management includes the following guiding principles:

- Performance objectives are established in partnership with affected organizations and are directly aligned to the DOE strategic goals;
- Resource decisions and budget requests are tied to results; and
- Results are used for management information, establishing accountability, and driving long-term improvements.

The performance-based approach focuses the evaluation of the Contractor's performance against these Performance Goals. Progress against these Goals is measured through the use of a set of Objectives. The success of each Objective will be measured based on a set of Performance Measures, both objective and subjective, that are to focus primarily on end-results or impact and not on processes or activities. Measures provide specific evidence of performance, and collectively, they provide the body of evidence that indicates performance relative to the corresponding Objectives. On occasion however, it may be necessary to include a process/activity-oriented measure when there is a need for the Contractor to develop a system or process that does not currently exist but will be of significant importance to the DOE and the Laboratory when completed or that lead to the desired outcome/result.

### Performance Goals, Objectives, and Performance Measures

The following sections describe the Performance Goals, their supporting Objectives, and associated performance measures for FY 2008.

## **1.0 Provide for Efficient and Effective Mission Accomplishment**

**The Contractor produces high-quality, original, and creative results that advance science and technology; demonstrates sustained scientific progress and impact; receives appropriate external recognition of accomplishments; and contributes to overall research and development goals of the department and its customers.**

The weight of this Goal is 24%

This Goal measures the overall effectiveness and performance of the Contractor in delivering science and technology results which contribute to and enhance the DOE's mission of protecting our national and economic security by providing world-class scientific research capacity and advancing scientific knowledge by supporting world-class, peer-reviewed scientific results, which are recognized by others.

Refer to Attachment II

**The overall numerical score is 3.8 and grade assigned is A.**

### **1.1 Science and Technology Results Provide Meaningful Impact on the Field**

**Objective Weight = 38%**

**Numerical score = 3.9    Grade = A**

Refer to Attachment II

### **1.2 Provide Quality Leadership in Science and Technology**

**Objective Weight = 26%**

**Numerical score = 3.6    Grade = A-**

Refer to Attachment II

### **1.3 Provide and Sustain Outputs That Advance Program Objectives & Goals**

**Objective Weight = 24%**

**Numerical score = 3.8    Grade = A**

Refer to Attachment II

### **1.4 Provide for Effective Delivery of Products**

**Objective Weight = 12%**

**Numerical score = 3.8    Grade = A**

Refer to Attachment II



Science Program Office <sup>1</sup>	Letter Grade	Numerical Score	Weight	Weighted Score	Overall Score
<b>Office of Basic Energy Sciences</b>					
1.1 Impact	A	3.9	50%	1.95	
1.2 Leadership	A	3.9	20%	0.78	
1.3 Output	A	3.7	15%	0.56	
1.4 Delivery	A	3.7	15%	0.56	
Overall BES Total					3.84
<b>Office of Biological and Environmental Research</b>					
1.1 Impact	A	4.0	30%	1.20	
1.2 Leadership	A+	4.1	20%	0.82	
1.3 Output	A	3.9	20%	0.78	
1.4 Delivery	A	3.9	30%	1.17	
Overall BER Total					3.97
<b>Office of High Energy Physics</b>					
1.1 Impact	A	3.8	30%	1.14	
1.2 Leadership	A-	3.5	30%	1.05	
1.3 Output	A	3.8	30%	1.14	
1.4 Delivery	A	3.8	10%	0.38	
Overall HEP Total					3.71
<b>Office of Workforce Development for Teachers and Scientists</b>					
1.1 Impact	B	3.0	25%	0.75	
1.2 Leadership	B+	3.2	30%	0.96	
1.3 Output	B+	3.3	30%	0.99	
1.4 Delivery	B+	3.4	15%	0.51	
Overall WDTs Total					3.21

**Table 1.1-1.0 Program Office Performance Goal Score Development**

<sup>1</sup> A complete listing of the S&T Goals & Objectives weightings for the SC Program is provided within Attachment I to this plan.

Science Program Office	Letter Grade	Numerical Score	Funding Weight (BA)	Weighted Score	Overall Weighted Score
<b>Office of Basic Energy Sciences</b>	A	3.84	40.0%	1.54	
<b>Office of Biological and Environmental Research</b>	A	3.97	0.7%	0.03	
<b>Office of High Energy Physics</b>	A-	3.71	59.2%	2.19	
<b>Office of Workforce Development for Teachers and Scientists</b>	B+	3.21	0.1%	0.00	
Performance Goal 1.0 Total					3.76

**Table 1.2 Overall Performance Goal Score Development**

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

**Table 1.3 – 1.0 Goal Final Letter Grade**

**2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operations of Research Facilities**

**The Contractor provides effective and efficient strategic planning; fabrication, construction and/or operations of Laboratory research facilities; and are responsive to the user community.**

The weight of this Goal is 56%

This Goal shall measure the overall effectiveness and performance of the Contractor in planning for and delivering leading-edge research facilities to ensure the required capabilities are present to meet today's and tomorrow's complex challenges. It also measures the Contractor's innovative operational and programmatic means for implementation of systems that ensures the availability, reliability, and efficiency of facilities; and the appropriate balance between R&D and user support.

Refer to Attachment II

**The overall numerical score is 3.6 and grade assigned is A-.**

**2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs (i.e., activities leading up to CD-2)**

**Objective Weight = 12%**

**Numerical score = 3.5      Grade = A-**

Refer to Attachment II

**2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components (execution phase, post CD-2 to CD-4)**

**Objective Weight = 44%**

**Numerical score = 3.5      Grade = A-**

Refer to Attachment II

**2.3 Provide Efficient and Effective Operation of Facilities**

**Objective Weight = 36%**

**Numerical score = 3.8      Grade = A**

Refer to Attachment II

**2.4 Utilization of Facility to Grow and Support Lab's Research Base and External User Community**

**Objective Weight = 8%**

**Numerical score = 3.9      Grade = A**

Refer to Attachment II

Science Program Office <sup>2</sup>	Letter Grade	Numerical Score	Weight	Weighted Score	Overall Score
<b>Office of Basic Energy Sciences</b>					
2.1 Provide Effective Facility Design(s)	A-	3.5	10%	0.35	
2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components	A-	3.5	60%	2.10	
2.3 Provide Efficient and Effective Operation of Facilities	A-	3.7	20%	0.74	
2.4 Effective Utilization of Facility to Grow and Support the Laboratory's Research Base	A	3.9	10%	0.39	
Overall BES Total					3.58
<b>Office of Biological and Environmental Research</b>					
2.1 Provide Effective Facility Design(s)			0%		
2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components			0%		
2.3 Provide Efficient and Effective Operation of Facilities	A+	4.1	90%	3.69	
2.4 Effective Utilization of Facility to Grow and Support the Laboratory's Research Base	A+	4.1	10%	0.41	
Overall BER Total					4.10
<b>Office of High Energy Physics</b>					
2.1 Provide Effective Facility Design(s)	B+	3.4	20%	0.68	
2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components			0%		
2.3 Provide Efficient and Effective Operation of Facilities	A	3.8	80%	3.04	
2.4 Effective Utilization of Facility to Grow and Support the Laboratory's Research Base			0%		
Overall HEP Total					3.72

**Table 2.1 – 2.0 Program Office Performance Goal Score Development**

<sup>2</sup> A complete listing of the S&T Goals & Objectives weightings for the SC Program is provided within Attachment I to this plan.

Science Program Office	Letter Grade	Numerical Score	Funding Weight (BA)	Weighted Score	Overall Weighted Score
Office of Basic Energy Sciences	A-	3.58	73.1%	2.62	
Office of Biological and Environmental Research	A+	4.10	1.9%	0.08	
Office of High Energy Physics	A-	3.72	25.0%	0.93	
Overall Program Office Total					3.62

**Table 2.2 Overall Performance Goal Score Development**

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

**Table 2.3 – 2.0 Goal Final Letter**

### **3.0 Provide Effective and Efficient Science and Technology Program Management**

**The Contractor provides effective program vision and leadership; strategic planning and development of initiatives; recruits and retains a quality scientific workforce; and provides outstanding research processes, which improve research productivity.**

The weight of this Goal is 20%

This Goal shall measure the overall effectiveness and performance of the Contractor in planning for and delivering leading-edge research facilities to ensure the required capabilities are present to meet today's and tomorrow's complex challenges. It also measures the Contractor's innovative operational and programmatic means for implementation of systems that ensures the availability, reliability, and efficiency of facilities; and the appropriate balance between R&D and user support.

Refer to Attachment II

**The overall numerical score is 3.4 and grade assigned is B+.**

### **3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision**

**Objective Weight = 33 %**

**Numerical score = 3.5    Grade = A-**

Refer to Attachment II

### **3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management**

**Objective Weight = 33 %**

**Numerical score = 3.3    Grade = B+**

Refer to Attachment II

### **3.3 Provide Efficient and Effective Communications and Responsiveness to Customer Needs**

**Objective Weight = 34 %**

**Numerical score = 3.4    Grade = b+**

Refer to Attachment II

Science Program Office <sup>3</sup>	Letter Grade	Numerical Score	Weight	Weighted Score	Overall Score
<b>Office of Basic Energy Sciences</b>					
3.1 Effective and Efficient Stewardship	A-	3.5	40%	1.40	
3.2 Project/Program Planning and Management	B+	3.1	30%	0.93	
3.3 Communications and Responsiveness	B+	3.4	30%	1.02	
Overall BER Total					3.35
<b>Office of Biological and Environmental Research</b>					
3.1 Effective and Efficient Stewardship	A	4.0	20%	0.80	
3.2 Project/Program Planning and Management	A	4.0	30%	1.20	
3.3 Communications and Responsiveness	A+	4.1	50%	2.05	
Overall BES Total					4.05
<b>Office of High Energy Physics</b>					
3.1 Effective and Efficient Stewardship	B+	3.4	40%	1.36	
3.2 Project/Program Planning and Management	A-	3.6	40%	1.44	
3.3 Communications and Responsiveness	B+	3.2	20%	0.64	
Overall HEP Total					3.44
<b>Office of Workforce Development for Teachers and Scientists</b>					
3.1 Effective and Efficient Stewardship	B+	3.3	20%	0.66	
3.2 Project/Program Planning and Management	B+	3.3	40%	1.32	
3.3 Communications and Responsiveness	B+	3.3	40%	1.32	
Overall WDTs Total					3.30

Table 3.1 – 3.0 Program Office Performance Goal Score Development

<sup>3</sup> A complete listing of the S&T Goals & Objectives weightings for the SC Program is provided within Attachment I to this plan.

Science Program Office	Letter Grade	Numerical Score	Funding Weight (BA)	Weighted Score	Overall Weighted Score
<b>Office of Basic Energy Sciences</b>	B+	3.35	62.9%	2.11	
<b>Office of Biological and Environmental Research</b>	A+	4.05	2.0%	0.08	
<b>Office of High Energy Physics</b>	B+	3.44	34.9%	1.20	
<b>Office of Workforce Development for Teachers and Scientists</b>	B+	3.30	0.1%	0.00	
Overall Program Office Total					3.40

Table 3.2 – Overall Performance Goal Score Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 3.3 – 3.0 Goal Final Letter Grade



## Office of Science Program Office Goal & Objective Weightings

### ATTACHMENT I

SLAC Appraisal Weight Sheet		ASCR	BES	BER	HEP	WDTs
		Weight	Weight	Weight	Weight	Weight
<b>Goal 1.0 Mission Accomplishment</b>						
	<b>Goal's weight</b>	<b>80</b>	<b>15</b>	<b>10</b>	<b>40</b>	<b>65</b>
1.1 Impact (significance)		40	50	30	30	25
1.2 Leadership (recognition of S&T accomplishments)		30	20	20	30	30
1.3 Output (productivity)		15	15	20	30	30
1.4 Delivery		15	15	30	10	15
<b>Goal 2.0 Design, Fabrication, Construction and Operation of Facilities</b>						
	<b>Goal's weight</b>	<b>0</b>	<b>65</b>	<b>65</b>	<b>40</b>	<b>0</b>
2.1 Design of Facility (the initiation phase and the definition phase, i.e. activities leading up to CD-2)		0	10	0	20	0
2.2 Construction of Facility/Fabrication of Components (execution phase, Post CD-2 to CD-4)		0	60	0	0	0
2.3 Operation of Facility		0	20	90	80	0
2.4 Utilization of Facility to Grow and Support Lab's Research Base and External User Community		0	10	10	0	0
<b>Goal 3.0 Program Management</b>						
	<b>Goal's weight</b>	<b>20</b>	<b>20</b>	<b>25</b>	<b>20</b>	<b>35</b>
3.1 Stewardship of Scientific Capabilities and Programmatic Vision		30	40	20	40	20
3.2 Program Planning and Management		40	30	30	40	40
3.3 Program Management-Communication & Responsiveness (to HQ)		30	30	50	20	40

#### 4.0 Provide Sound and Competent Leadership and Stewardship of the Laboratory

**The Contractor's Leadership provides effective and efficient direction in strategic planning to meet the mission and vision of the overall Laboratory; is accountable and responsive to specific issues and needs when required; and corporate office leadership provides appropriate levels of resources and support for the overall success of the Laboratory.**

The weight of this Goal is 25%

This Goal measures the Contractor's Leadership capabilities in leading the direction of the overall Laboratory. It also measures the responsiveness of the Contractor to issues and opportunities for continuous improvement and corporate office involvement/commitment to the overall success of the Laboratory.

**The overall numerical score is 3.7 and grade assigned is A-.**

- *FY08 witnessed extraordinary improvement in the leadership and stewardship of the Laboratory* that has driven critical improvements across the Laboratory and more importantly, *established the foundation for long-term success, sustainable growth, and continuing improvement.*
- SLAC National Accelerator Laboratory and Stanford University provided (a) *clear vision* and drive to the new missions at SLAC, (b) *exceptionally strong engagement and oversight by the University*, and (c) established the *framework for a clear and effective governance* process of the Laboratory by SU.
- SLAC *filled critical leadership positions* with high-caliber executives including the Stanford University Vice President for SLAC, Laboratory Directory, Chief Operations Officer, Director of ES&H, Director of Communications, and Director of Procurement.
- SLAC, SU, and SSO worked collaboratively to develop and implement a *Partnering Agreement* as well as an *Operating Model* that has provided the *intuitional framework to drive mission success* and a principle-based approach to overcoming challenges at the Laboratory.
- SLAC developed a high quality *Laboratory Ten Year Site Plan* and the *OneLab* operating model which strategically articulates where the Laboratory is going and how it intends to deliver.
- SLAC and SU leadership have begun the process of establishing a *culture of accountability* at the Laboratory, leading by example and setting a high standard for operations, management, and safety excellence. Laboratory Senior Leadership spent many hours in small group meetings communicating the new direction and operating standards of the Laboratory.
- The *quality of scientific leadership across the laboratory continues to be outstanding* on many broad fronts, with special acknowledgement to the leadership of SPEAR3, GLAST/FERMI, BaBar, Kavli, and LCLS. The Laboratory realized excellent science: all three focus areas (photon science, particle physics and particle astrophysics) produced many high quality publications.
- SLAC and SU leadership sponsored a *Safety Summit* in June to focus on establishing positive feedback mechanisms for the reporting and investigation of accidents and incidents; the results have been a significant improvement in this operational area. Additionally, the *plan it right or don't do it* campaign was very successful in improving the positive safety culture.
- SLAC exerted significant leadership in completing programmatic mission change workforce realignment in 2008. This was the largest that the Laboratory ever completed and was done in a timely, professional, and humane matter.
- SU *established the Board of Overseers* that has broad responsibility for the oversight of science and all major support functional areas at the laboratory, moving to a fully functional oversight board chaired by the Vice President for SLAC.
- SLAC provided a *central role in the successful on-going integration of the GLAST* with the launch of the GLAST satellite in June. Early results from the satellite have exceeded all expectations.
- SLAC leadership took *very positive and proactive actions in November at the LCLS* reversing a disturbingly high accident and injury trend at the project. The result has been a significant decrease in accidents and injuries on the construction project where the project experienced only one minor TRC in the

last five months of FY08, despite the fact that a significant amount of work was completed in that timeframe.

**The overall numerical score is 3.7 and grade assigned is A-.**

#### **4.1 Provide a Distinctive Vision for the Laboratory and an Effective Plan for Accomplishment of the Vision to Include Strong Partnerships Required to Carry Out those Plans**

Objective weight = 30%

Numerical score = 3.6      Grade = A-

- SLAC developed an outstanding business plan (Ten Year Site Plan) articulating the vision and mission that fully leveraged core competencies of the Laboratory and the strategic agenda of the Office of Science.
- SLAC adopted and implemented a multi-program operating concept through the *OneLab* vision, which transformed the Site from operating as several independent stand alone laboratories to a single system that integrates work together to solve issues across the site.
- SLAC developed a Strategic Laboratory Infrastructure (SLI) Project proposal for a FY10 start, with CD-0 approved. This project plan was a significant improvement to prior year SLI proposals.
- SLAC leadership engaged the entire laboratory throughout the year in small group/work group discussion sessions in order to better communicate, align, and energize the laboratory as it moved through a period of significant change.
- The business planning process evolved significantly in FY08 to support the multi-program operating model and OneLab vision, however, the business systems require additional work in order to fully align and support the laboratory and the laboratory's mission.
- Transition from a single to a multi program lab made significant progress in FY08.
- The GLAST/FERMI large area space telescope, a collaboration of DOE and NASA in the US and space agencies from Italy, Japan, Sweden and France was successfully launched in June. SLAC provided outstanding leadership in preparing, launching, and integrating early science from the space probe.
- SLAC successfully completed final runs of *BABAR*, detecting the *bottomonium* particle and achieving record positron intensity. This very successful collaboration included agencies in ten foreign nations. Half of the over 600 scientists working on *BABAR* are from non-US institutions. Researchers from both LBNL and LLNL work on *BABAR*; the remainder of the US users come from 3 dozen US university groups.
- SLAC continued its highly successful Public Lecture Series, *symmetry* magazine, and work in the international particle physics community which achieved a significant milestone with the start up of the Large Hadron Collider (LHC) at CERN.
- SLAC developed an effective baseline cost of doing business model that will be utilized in FY09 as the basis for strategically reducing costs in support areas across the laboratory.
- SLAC outreach/communications supported the Science Bowl, Bring Your Child to Work Day, various symposiums, etc, but seemed to stall in expanding sphere of influence.
- With a new Communications Director hired late in the FY, it is expected that SLAC will become more aggressive with their community outreach program to include events such as a community leader day and public tours.

#### **4.2 Provide for Responsive and Accountable Leadership throughout the Organization**

Objective weight = 40%

Numerical score = 3.6      Grade = A-

- In December 2007, Stanford University significantly strengthened the corporate oversight by naming the Stanford University Vice President for SLAC, charged with oversight and assurance to ensure SLAC is

conducting its work and operations as the laboratory has promised.

- SLAC and SU leadership have begun the process of establishing a *culture of accountability* at the Laboratory, leading by example and setting a high standard for operations, management, and safety excellence.
- SLAC and SU leadership sponsored a *Safety Summit* in June to focus on establishing positive feedback mechanisms for the reporting and investigation of accidents and incidents; the results have been a significant improvement in this operational area. Additionally, the *plan it right or don't do it* campaign was very successful in improving the positive safety culture atmosphere.
- SLAC leadership took very positive and proactive actions in November at LCLS, which reversed a disturbingly high accident and injury trend at the project. The result has been a significant decrease in accidents and injuries on the construction project despite the amount of work that was completed in that timeframe.
- Stanford University established the SLAC *Board of Overseers*, significantly improving the oversight process at the Laboratory.
- SLAC filled critical leadership positions in FY08 including the Stanford University Vice President for SLAC, Laboratory Directory, Chief Operations Officer, Director of ES&H, Director of Communications, and Director of Procurement.
- SLAC follow up and follow through of its actions in response to the September 13, 2007 pipe explosion accident was excellent.
- Significant improvements in work control and authorization led to a significant reduction in the rate and severity of accidents and incidents.

#### 4.3 Provide Efficient and Effective Corporate Office Support as Appropriate

Objective weight = 30%

Numerical score = 3.9      Grade = A

- Stanford University significantly improved its involvements and cognizance of the laboratory in FY08. It has demonstrated its corporate commitment to the success of the laboratory on a broad number of fronts including the appointment of the Vice President for SLAC and the Laboratory Director, the significant contribution the University made recruiting highly qualified senior leadership to the Site, as well as the day-to-day support and interaction that the University now provides.
- SLAC, SU, and SSO worked collaboratively to develop and implement a *Partnering Agreement* as well as an *Operating Model* that has provided the institutional framework to drive mission success and a principle-based approach to overcoming challenges at the Laboratory.
- The communication flow between SU, SLAC and the DOE significantly improved in FY08.
- Corporate governance of SLAC by SU made significant improvement in FY08 through the institutionalization of the SLAC Board of Overseers.
- There was not an effective system-wide assessment process employed by SU in the oversight of SLAC.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
<b>4.0 Effectiveness and Efficiency of Contractor Leadership and Stewardship</b>					
4.1 Provide a Distinctive Vision for the Laboratory and an Effective Plan for Accomplishment of the Vision to Include Strong Partnerships Required to Carry Out those Plans	A-	3.6	30%	1.08	
4.2 Provide for Responsive and Accountable Leadership throughout the Organization	A-	3.6	40%	1.44	
4.3 Provide Efficient and Effective Corporate Office Support as Appropriate	A	3.9	30%	1.17	
<b>Performance Goal 4.0 Total</b>					<b>3.7</b>

**Table 4.1- 4.0 Goal Performance Rating Development**

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

**Table 4.2 – 4.0 Goal Final Letter Grade**

## 5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection

**The Contractor sustains and enhances the effectiveness of integrated safety, health and environmental protection through a strong and well deployed system.**

The weight of this Goal is 20%

This Goal shall measure the Contractor's overall success in preventing worker injury and illness, and achieving the Office of Science safety goals; implementing a robust and effective environmental protection program; effectively implementing the SLAC Integrated Safety and Environmental Management System down, through and across the SLAC organization and its contractors and sub-tier subcontractors; and providing effective and efficient waste management, minimization, and pollution prevention.

SLAC made substantial performance improvements in FY08 throughout SLAC in the ES&H program. SLAC's new executive leadership, including line organizations, and the new ES&H director, made significant advancements in integrating safety and work planning into day-to-day operations.

SLAC took proactive steps in improving the quality incident investigation and reporting, and in improving their safety oversight of SLAC's subcontractor workforce.

SLAC initiated an effective "Plan of the Week" tool for work planned by all SLAC line organizations, and SLAC management is effectively utilizing this tool to better plan, coordinate, authorize, and approve work across SLAC.

SLAC is finalizing their Work Planning and Controls (WP&C) processes and is continuing their on-going development and implementation of WP&C across the site. SLAC and Stanford University have demonstrated their recognition of the importance of institutionalizing work planning and controls processes at the site and the need to develop a culture that encourages stop work when unsafe work activities and behaviors are observed.

With further refinements in safety process development, Stanford University and SLAC will be on track for significant improvement in FY09.

**The overall numerical score is 3.0 and grade assigned is B.**

## 5.1 Provide a Work Environment that Protects Worker Safety, Health and the Environment

Objective weight = 30%

Numerical score = 3.1      Grade = B+

Following a series of incidents at SLAC between March and May 2008 in a broad range of work activities (incidents that resulted in personnel injury or equipment damage), SLAC teamed with SSO to improve the ISM process. SLAC then made substantial improvements in incident investigations, event analysis reporting, and in their resulting corrective actions.

SLAC needs to provide additional resources and internal training to ensure that ORPS-reportable events are reported to the SSO and ORPS database in a timely manner and in accordance with reporting protocols. This includes proper categorization of ORPS events consistent with reporting criteria outlined in the DOE ORPS Manual.

Although SLAC did not meet the DOE Office of Science Total Recordable Case (TRC) and Days Away Restricted or Transferred (DART) goals, SLAC did reverse the last two years trend of increased injuries/illnesses as SLAC reduced TRC and DART by nearly one-third.

The injury/illness rates for the LCLS construction project were unacceptably high for the first half of the year. The injury/illness rates for LCLS, however, improved considerably during the second half of FY08. The improvement in safety at LCLS was largely attributed to a greater level of senior management attention to the construction safety issues and a significantly increased level of oversight provided by SLAC and SSO. Overall, the 4<sup>th</sup> quarter FY08 safety performance for SLAC was outstanding with a DART rate of zero in the last 5 months of FY08.

SLAC's Office of Assurance validated 100% of all completed corrective actions and completed all the scheduled FY08 effectiveness reviews on time.



## 5.2 Provide Efficient and Effective Implementation of Integrated Safety, Health and Environmental Management.

Objective weight = 55%

Numerical score = 2.8      Grade = B

SLAC made significant progress in its Work Planning and Controls (WP&C) processes in preparation for implementation of the process across the site in FY09. SLAC and Stanford University have recognized the importance of institutionalizing work planning and controls processes at the site and the need to develop a culture that encourages stop work when unsafe work activities and behaviors are observed. SLAC's work planning and controls processes has been identified as a weakness in previous reviews of ISMS at SLAC and is considered a high priority by the SSO that requires a high degree of ongoing senior management attention, and commensurate resources to achieve a more expeditious site-wide implementation of the WP&C processes. In FY08, SLAC made good progress in this area, however, the effectiveness of SLAC's follow-up actions to address previous ISMS review findings and root causes will need to be assessed beginning in FY09.

SLAC initiated an effective "Plan of the Week" SharePoint site and weekly meeting. This management tool captures the future planned work for all SLAC line organizations and is being effectively utilized by SLAC management to better plan, coordinate, authorize, and approve work across the site. SSO attends these weekly meetings with SLAC to better understand planned work activities and to ensure there is adequate oversight by SLAC and DOE.

SLAC revised Chapter 33 of the ESH Manual on line management self-assessments; however, it is not robust enough to ensure that SLAC line managers and supervisors are routinely walking work spaces, observing work processes, in order to identify non-compliances and effectiveness of ISM implementation.

SSO review of SLAC's incident investigation reports showed weaknesses in the laboratory's ability to conduct a thorough analysis of all causal factors. This has resulted in identification of corrective actions that may not effectively address findings and root causes. SLAC is in process of improving the incident investigation process and is planning additional training in causal analysis.

SLAC completed all of the OIO CAP corrective actions by the scheduled due dates. SLAC's Office of Assurance validated 100% of all completed corrective actions and completed all the scheduled FY08 effectiveness reviews on time. The ongoing effectiveness reviews will allow SSO and SLAC to determine if the corrective actions have been effective in addressing the key findings and causal factors identified in previous ISMS reviews.

Discussions between SSO and SLAC regarding the need to restructure and significantly improve SLAC's Hot Work Program began early in FY08. A revised *interim* program was submitted to SSO at the end of 3<sup>rd</sup> Q FY08. SSO has been monitoring the implementation of the newly revised program and has found that although significant improvements have been made, some challenges and weaknesses continue to remain in ensuring an effective program.

Although the draft Facility Fire Protection Assessment program submitted by the end of the 3<sup>rd</sup> Quarter FY08 contained some life and fire safety elements, compliance with the Life Safety Code and fire suppression requirements for all facilities were not fully addressed.

## 5.3 Provide Efficient and Effective Waste Management, Minimization, and Pollution Prevention

Objective weight = 15%

Numerical score = 3.7      Grade = A-

SLAC continued to make good progress on follow-up actions related to EMS implementation at the site. Many of the planned EMP targets were completed; however, others were either delayed or cancelled due to lack of sufficient resources. SLAC appears to be on schedule for meeting the June 2009 commitment under DOE Order 450.1A for declaring that the Site's EMS conforms to the requirements of the order. SLAC appears to be making progress on

addressing some of the areas required by Executive Order 13423; however, it will need to continue to provide additional resources in other areas including electronics stewardship and sustainable practices that are mandated by DOE Orders 450.1A and 430.2B.

SLAC performed notably in the management of legacy and newly-generated low level waste. SLAC shipped almost twice as much low level waste off-site than the previous year. The hazardous waste program also demonstrated performance at a high level; however, greater attention is required to improve site-wide hazardous waste management practices and accountability specifically at the waste generating locations that are the responsibility of the line organizations. Opportunities for making significant reductions in non-hazardous and hazardous waste beyond those already achieved have been identified, but will require SLAC to evaluate existing priorities and provide needed resources to implement.

SLAC met all of the requirements for submittal of regulatory documentation to DOE and external regulators (e.g., ASER, TRI, NESHAPs, and HMBP). SLAC is continuing to make progress on reducing its inventory of legacy chemicals and identifying outlets for unused chemicals, however, the program is prevented from pursuing a more aggressive cleanout schedule due to funding priorities. SLAC should continue to actively pursue pollution prevention and risk reduction opportunities in the environmental radiation protection (e.g., tritium reduction at BDE) and storm water programs (e.g., secondary containment). SLAC worked successfully with the SSO to streamline the NEPA review process and to ensure consistency with the evaluation of environmental aspects and impacts required by the site EMS.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
<b>5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection</b>					
5.1 Provide a Work Environment that Protects Workers and the Environment	B+	3.1	30%	.93	
5.2 Provide Efficient and Effective Implementation of Integrated Safety, Health and Environment Management	B	2.8	55%	1.54	
5.3 Provide Efficient and Effective Waste Management, Minimization, and Pollution Prevention	A-	3.7	15%	.56	
<b>Performance Goal 5.0 Total</b>					<b>3.0</b>

**Table 5.1 – 5.0 Goal Performance Rating Development**

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

**Table 5.2 – 5.0 Goal Final Letter Grade**

**6.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)**

**The Contractor sustains and enhances core business systems that provide efficient and effective support to Laboratory programs and its mission(s).**

The weight of this Goal is 25%

This Goal shall measure the Contractor's overall success in deploying, implementing, and improving integrated business system that efficiently and effectively support the mission(s) of the Laboratory.

*6.1 Financial Management System:* SLAC FMS performance was slightly below target, but moving in the right direction across this measure. Reviews were generally positive with some recommendations for improvements. SLAC is producing continual improvements in small steps, but critical for the future. The new SLAC Improvement Initiative (SII) will bring SLAC's financial system up to current standards. What is needed now is aggressive movement by Stanford University in funding and resource support for SLAC.

*6.2 Procurement:* The purchasing system internal business processes were ineffective; deficiencies include poor quality control, inadequate development of subcontract packages, and outdated procurement procedures. SLAC had an unsatisfactory performance on the Procurement Balanced Score Card (BSC), receiving a score 54%. SLAC has initiated positive steps in this area including hiring of a new Procurement Director and reorganization of the procurement organization.

*6.2 Property:* The property Balanced Scorecard (BSC) rating was 92.25% against the target of 90%. SLAC resolved all findings related to the August 2007 PERT review. Most notable, was the implementation of a new process for high risk property. SLAC reduced the vehicle fleet inventory from 221 to 164, a 25.8 % vehicle reduction.

*6.3 Human Resources:* Due to unanticipated budget cuts, SLAC developed and implemented a workforce restructuring plan. SLAC staff reductions were 180 employees, 12.3% of the total workforce. The staff reductions were conducted with minimal disruption and in a respectful and humane manner. SLAC delayed two system related goals but plans to implement the system related goals in FY 2009.

*6.4 Internal Audit and Oversight:* SLAC has performed slightly below target in this measure for FY08, but their continuing, very good OMB A-123 performance (internal controls), renewed focus and more comprehensive audits plans by the Stanford University Internal Audit Department, and new SII system improvement plan will continue to improve their performance to target level and possibly beyond. The real progress to beyond target level will be determined by the current and future execution of the SII Plan, its speed and timeliness.

**The overall numerical score is 2.6 and grade assigned is B-.**

**6.1 Provide an Efficient, Effective and Responsive Financial Management System(s)**

Objective Weight = 15%

Numerical score = 3.0      Grade = B

SLAC is on the correct path to financial management system (FMS) improvement with the SLAC Improvement Initiative (SII) and use of the IT Governance Review system model as the guide for areas of future improvement. SLAC knows and has listed its opportunities for improvement. However, what is needed most now is aggressive movement forward by Stanford University (SU) in funding and resource support for SLAC. None of the financial reviews disclosed material or notable performance deficiencies. All reviews had some recommendations for improvement, including some from the Procurement Review (see below). SLAC is improving their FMS, and the SII will help immensely.

SLAC has shown continuing improvements in processes, in increasing some staff resource acquisitions, and some functional re-assignments of staff resources.

SLAC is within one percent of attaining the target level of performance against the BSC for financial management system reporting. SSO expects continued improvement to meet the target level and beyond in this performance measure.

SLAC met the budget management and execution target level performance despite the reduction in funding (January - Consolidated Appropriation Act) and the abbreviated budget call window.

SLAC did provide copies of some policies and procedures by the due date, with more policies in final development. However, the performance target includes communication to all the appropriate SLAC staff, and understanding by the applicable staff. The efforts by SLAC in these areas have not been visible (and normally would not be visible to SSO), but they have also not made their efforts known to the SSO. SLAC is moving in the right direction with their efforts, but still needs more emphasis on this area with the completion of all policies and procedures in hard copy and thorough communication to all appropriate staff.

## **6.2 Provide an Efficient, Effective, and Responsive Acquisition and Property Management System(s)**

Objective Weight = 50%

Numerical score = 2.3      Grade = C+

### **Procurement**

To assist SLAC with the Corrective Action Plan for PERT, the DOE Contracting Officers (CO) met with the Purchasing Department, discussed their progress, and provided recommendations in order to successfully achieve the objectives of the PERT review and consider raising the dollar threshold for subcontract approval. It appeared that SLAC had agreed to the changes and did implement a Statement of Work training to facilitate better subcontracts. The Site Office provided sample checklists to improve the procurement files and SLAC also developed several of their own. Purchasing procedures for subcontracts up to the \$500K threshold were submitted and the threshold was subsequently raised from \$100K to \$500K. The Site Office requested that the CAP be revised to reflect the changes agreed upon and it took SLAC approximately 4 months to re-submit the CAP for the PERT.

In the beginning of 4th quarter, SSO and SLAC senior management intervened in hopes to move the SLAC procurement system forward. SLAC hired a new Procurement Director and reorganized the Department in an effort to implement needed change and improvements.

SLAC successfully completed procurement training for their personnel with more than 90% of their personnel receiving training on four courses.

SLAC did not meet the 90% BSC but received a composite score of 54% and an overall unsatisfactory rating. The low score was due largely to SLAC's lack of effective business controls in the procurement and administration of subcontracts. For the first half of the year, subcontract reviews were performed by SSO on all actions greater than \$100K and during this time frame 82% of subcontract submissions were approved without comment. Due to an improvement in the subcontract actions as well as SLAC's submission of their revised purchasing procedures for actions up to \$500K, the SSO review threshold was increased from \$100K to \$500K in March 2008. However, the second half of the year saw a dramatic decrease in the number of subcontracts approved with an approval rating of only 46%. This was caused, in part, because a greater proportion of more complex actions were being submitted during this period compared to the first half of the year. Moreover, SLAC was not able to submit their final, comprehensive purchasing procedures for approval by the SSO until August '08 and that submission was recalled by the new SLAC Procurement Manager. SLAC also failed to meet any of the socio-economic targets and has been over reporting its performance because incorrect values were utilized in its calculations. Another area of weakness was in the Effective Utilization of Alternative Procurement approaches, specifically use of E-Commerce.

## Property

SLAC corrected all finding listed in the August 2007 Independent Procurement Evaluation and Review Team (PERT) report. Most notable was the development and implementation of a high risk property process. All property management processes were updated by SLAC in FY08 and approved by DOE.

SLAC received a composite score of 92.25% on the property/fleet balanced score card. A significant improvement was made in vehicle utilization which improved from 81.45% in FY07 to 87.2% in FY08. SLAC improved vehicle utilization by reducing its fleet from 221 to 164, a 25.8 % vehicle reduction. The vehicle reduction included the elimination of four non-law enforcement sport utility vehicles.

Two areas where SLAC did not perform well were, 1) personal property acquired via purchase card is recorded in the property and financial database within 72 hours or receipt of property where the National target is 98%. There were 246 items acquired via purchase card, of which 225 were recorded in the data base within 72 hours, for an overall percentage of 91.5% (Good). This is the same rating SLAC received in FY07, and 2) SLAC failed to increase the number of items sold online by 10%. The actual increase in online sales in FY08 was 2.9%.

### 6.3 Provide an Efficient, Effective, and Responsive Human Resources Management System and Diversity Program

Objective Weight = 20%

Numerical score = 2.9      Grade = B

SLAC's plans to improve HR systems and processes in FY08 had limited success. SLAC spent the first four months of the year focused on conducting a workforce restructuring of 180 people, 12.3% of SLAC's total workforce. The restructuring, due to the budget reduction, were conducted with minimal disruption and in a respectful and humane manner. With respect to streamlining HR work, SLAC did not implement the three items they had targeted for FY08, 1) self service process in which employees can update appropriate information in their personnel records, 2) training for senior management on the legal requirements of management, communication skills and problem solving skills, and 3) electronic distribution of routine personnel management reports. The electronic distribution of routine personnel management reports is in its final testing stages, but has not yet been rolled out to SLAC managers.

SLAC's turnover rate in FY08, excluding the voluntary and involuntary layoffs, was 3.8%, well below the goal of 9%. The in-hire acceptance rate was 82.2%, slightly below the target of 85%.

Although SLAC developed a diversity recruitment plan in advance of the November 30, 2007 deadline, due to the restructuring and limited hiring opportunities in those job areas where under-utilization existed, the diversity recruitment plan was not fully implemented. However, SLAC did have excellent minority and female representation in all of the special programs; SULI, GEM, Work Study and Youth Opportunity.

### 6.4 Provide Efficient, Effective, and Responsive Management Systems for Internal Audit and Oversight; Quality; Information Management; and Other Administrative Support Services as Appropriate

Determination of the (Stanford University) provision of an efficient, effective, and responsive financial management system (s) for internal audit and oversight, quality, information management, and other administrative support systems will be based upon SLAC's implementation of DOE directions, guidelines, and recommendations; and the reliance on the work of others, particularly the Stanford University Internal Audit Department (SIAD), to accomplish overall assessments of the design and operation of internal controls for these various areas, in the determination of effectiveness for these management system.

Objective Weight = 15%

Numerical score = 3.0      Grade = B

SLAC completed the Cost Accounting Standard (CAS) Disclosure Statement adequacy and compliance audit. SLAC substantially met the schedule requirement for the documentation requested from the Defense Contract Audit



Agency (DCAA). SLAC revised its accounting structure to comply with CAS and DCAA requirements and is in full compliance.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
<b>6.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)</b>					
6.1 Provide an Efficient, Effective, and Responsive Financial Management System(s)	B-	3.0	15%	.45	
6.2 Provide an Efficient, Effective, and Responsive Acquisition and Property Management System(s)	C+	2.3	50%	1.15	
6.3 Provide an Efficient, Effective, and Responsive Human Resources Management System	B	2.9	20%	.58	
6.4 Provide Efficient, Effective, and Responsive Management Systems for Internal Audit and Oversight; Quality; Information Management; and Other Administrative Support Services as Appropriate	B	3.0	15%	.45	
<b>Performance Goal 6.0 Total</b>					<b>2.6</b>

**Table 6.1 – 6.0 Goal Performance Rating Development**

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

**Table 6.2 – 6.0 Goal Final Letter Grade**

**7.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs**

**The Contractor provides appropriate planning for, construction and management of Laboratory facilities and infrastructures required to efficiently and effectively carry out current and future S&T programs.**

The weight of this Goal is 15%

The sustained excellence in operating, maintaining, and Renewing the Facility and Infrastructure Portfolio to meet Laboratory needs shall measure the overall effectiveness and performance of the Contractor in planning for, delivering, and operations of Laboratory facilities and equipment needed to ensure required capabilities are present to meet today's and tomorrow's complex challenges.

The laboratory made significant improvements in some areas of Facility Operations. A new software based method has been implemented for maintenance planning and lifecycle analysis. The SLI project for modernization of SLAC infrastructure was approved. In late FY07 and early FY08 the laboratory hired two key facility staff to manage site planning an infrastructure. The new hires seem to be adding value and are making improvements to the management of these programs. The laboratory passed the FIMs certification audit. The SORI project has had a profound improvement in safety since the pipe explosion in the Fall of 2007 and the project has now worked 21,256 hours without a single TRC or DART injury. The outlook for evaluating and performing Differed Maintenance (DM) has improved.

**The overall numerical score is 3.3 and grade assigned is B+.**

**7.1 Manage Facilities and Infrastructure in an Efficient and Effective Manner that Optimizes Usage and Minimizes Life Cycle Costs**

Objective Weight = 50%

Numerical score = 3.2      Grade = B+

The lab has made significant headway in managing the facilities and infrastructure and for the most part met all of the goals for this section. The lab met the SC MII goal of 2.0%; the actual MMI the lab achieved for FY08 was 2%. SLAC also met the DM goals as set forth in the approved FY08 Ten Year Site Plan by spending more than the required \$686K to reduce the Deferred Maintenance back log. The laboratory also met the goal to complete 85% of planned preventative maintenance by actually completing 85.5% of the work. The laboratory technically met the goal to have an Asset Condition Index (ACI) of 95.5%. However, this was not achieved by spending more funds but rather by working with the Replacement Plant Value numbers to lower the ACI. The Computerized Maintenance Management System (CMMS) milestones have been met. The implementation of the CMMS should provide SLAC with the tools for improving the maintenance program.

The laboratory has been working aggressively to meet the TEAM initiative and the Executive Order 13423 requirements and has identified NORESKO as the ESCO contractor to help the site with energy efficiency. The approved ESPC proposal includes eight Energy Conservation Measures (ECM's) for a projected annual saving of \$1.2M over 15 years. The Draft Executable Plan was submitted and reviewed by SSO in FY08 and progress is being made towards implementing the finalized Executable Plan by the end of December 2008.

## 7.2 Provide Planning for and Acquire the Facilities and Infrastructure Required to Support Future Laboratory Programs

Objective Weight = 50%

Numerical score = 3.3      Grade = B+

### Implement environmental restoration program

SLAC has provided resources to effectively interface with the ID/IQ contractor on a range of implementation issues related to the EM environmental restoration project. There has been excellent ongoing communication between SLAC, SSO, and EM Oakland Projects Office on the environmental restoration project activities. SLAC has provided strong technical support and is on target for meeting the Water Board order milestone to complete and submit the Tritium OU remedial investigation report in December 2008. SLAC completed the FSUST DPE system construction upgrade as planned. The Group 1 Removal Action was a successfully performed activity which included multiple removal actions, additional sampling campaigns and the use of ecological risk based decision making. The comprehensive Completion Report was submitted as planned with an expectation of minimal Core Team comments. The site-wide database was completed this fiscal year but does not contain all of the historical sample information. A large unplanned effort has been undertaken by the DOE-EM ID/IQ contractor and SLAC to provide outside entities easier ability to evaluate the database information, determine associated data gaps and to fill these gaps in support of ongoing Remedial Investigation activities. No ID/IQ contractor collected data has been provided at this time, however, SLAC is working with the ID/IQ contractor to ensure the submitted data is in the proper format and contains the necessary information. Groundwater operation and maintenance activities are going well. No new systems have been transferred from the ID/IQ contractor to SLAC at this time. The Groundwater Volatile Organic Compound Operable Unit Feasibility Study and Remedial Action Plan are behind the baseline schedule due in part to significant textual changes as well as longer than planned DOE review times. The documents are still on track to meet the Enforceable Deadline due date. The groundwater monitoring appears to have been performed consistent with SLAC's self-monitoring plan. SLAC is maintaining the DOE accepted M&O contractor project baseline using the approved baseline change control thresholds and is reporting on the baseline utilizing their earned value management system. The internal baseline changes and monthly reports are starting to improve as experience is gained. SLAC has supported transition of DOE EM work to the ID/IQ contractor; however there remains a sense of uncertainty with the ID/IQ contractor's technical approach which will continue until the ID/IQ contractor is in the field performing work. Continued proactive communication and sharing of knowledge across contractors is necessary to ensure success.

### Effective execution of SORI project

SLAC execution of the S&ORI project has notably exceeded expectations. A total of 9 subtasks were scheduled to be completed and all were finished on or ahead of schedule and within budget. The FY08 baseline expectations in terms of cost and schedule were exceeded. SLAC FY2008 performance has positioned the project for an early completion with remaining funding. Because of this, the S&ORI project will be able to accomplish additional infrastructure work that was outside the cost limits of the project. Of major importance however, is the safety performance with which the project work was accomplished. The project worked 21,256 hrs. without a single TRC or DART. The project team did an excellent job in implementing lessons learned from its past year performance, which was crucial in changing the safety culture of the project.

### Effective execution of facility and infrastructure projects

A total of eighteen projects with total estimated cost >\$250K were tracked; of these, nine were closed, one was late by more than three months and two were >10% over budget. All projects were completed safely without a TRC or DART.

ELEMENT	Letter-Grade	Numerical Score	Objective Weight	Total Points	Total Points
<b>7.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs</b>					
7.1 Manage Facilities and Infrastructure in an Efficient and Effective Manner that Optimizes Usage and Minimizes Life Cycle Costs	B+	3.2	50%	1.6	
7.2 Provide Planning for and Acquire the Facilities and Infrastructure Required to support Future Laboratory Programs	B+	3.3	50%	1.7	
<b>Performance Goal 7.0 Total</b>					<b>3.3</b>

**Table 7.1 – 7.0 Goal Performance Rating Development**

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

**Table 7.2 – 7.0 Goal Final Letter Grade**

## **8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems**

**The Contractor sustains and enhances the effectiveness of integrated safeguards and security and emergency management through a strong and well deployed system.**

The weight of this Goal is 15%

The Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems Goal shall measure the Contractor's overall success in safeguarding and securing Laboratory assets that supports the mission(s) of the Laboratory in an efficient and effective manner and provides an effective emergency management program.

SLAC's overall performance in Cyber Security met expectation. SLAC mitigated and reported cyber security incidents within 24 hours. SLAC did not provide SSO with an IT re-architecture plan nor did they have a current network plan in place. As technology changes, the network will have to be expanded as well as upgraded, and SLAC needs to be prepared by having a plan. SLAC's cyber security training program met all requirements.

SLAC added staff to their Emergency Management Program; however, SLAC's program needs significant improvements to become effective. SLAC's key deliverables missed during the FY included the COOP Plan, and the conducting of an emergency exercise.

**The overall numerical score is 2.8 and grade assigned is B.**

### **8.1 Provide an Efficient and Effective Emergency Management System**

Objective Weight = 30%

Numerical score = 1.9      Grade = C

SLAC Emergency Management system and program needs improvement. Issues were noted in emergency reporting, notifications and investigations process. The Site Office reviewed of the process resulted in a number of recommendations which once implemented, should result in significant improvement in emergency notification and investigation process.

Plans for implementation of DOE O 151.1C was submitted, reviewed and commented by the Site Office. Draft of site-wide Emergency Base Plan and Hazardous Material Assessment were submitted to the Site Office at the end of FY08 and are under review and discussions. Further progress is needed to fully develop and implement these plans.

Development, approval, and implementation of SLAC's Continuity of Operations Plan (COOP) were not met in FY08.

### **8.2 Provide an Efficient and Effective System for Cyber-Security**

Objective Weight = 40%

Numerical score = 3.1      Grade = B+

SLAC performed well in mitigating and reporting Cyber Security incidents; mitigation measures were initiated as soon as the computer security team determined an incident occurred, and reports occurred within 24 hours. SLAC conducted network vulnerability checks daily and provided SSO the quarterly reports. SLAC provided risk assessments and current plans of action to SSO. SLAC completed all scheduled POA&Ms per FISMA requirements; however, SLAC failed to provide a structured approach (diagrams) to IT re-engineering.

SLAC employees were trained and accepted cyber security responsibilities prior to using SLAC IT systems.

### 8.3 Provide an Efficient and Effective System for the Protection of Special Nuclear Materials, and Property

Objective Weight = 10%

Numerical score = 3.4 Grade = B+

All radioisotopes have been tracked and accounted with the exception of one incident that identified a weakness in the program. The temporary (4 hour) loss of accountability of a small radioactive sample in SSRL identified a weakness in the change of custody procedure from radiation physics field operations to experimenters in SSRL. The corrective action identified resulted in the ongoing development of a formal Chain of Custody component of the sample custody transfer procedure. Training of RPFO and effected experimenters regarding the change in the procedure must also be completed.

A great deal of time and effort has been invested in preparing several of the nuclear sources/materials for recovery by other laboratories. The recovery of these sources/materials would greatly reduce the amount of unused nuclear materials on site and ensure that facility categorization remains at the radiological level. The recovery of the materials was completed for the first quarter of FY09.

Internal reviews were completed and corrective action plan items were completed on time. In addition, radiation physics has developed a database that will significantly improve the tracking and verification of all nuclear sources/materials on site. RP developed a master database that tracks all material on site in regards to DOE-STD-1027, DOE M 470.4-6, and 10 CFR 835. Nuclear material quantities are verified for reportable quantity and hazard categorization is calculated.

### 8.4 Provide an Efficient and Effective System for the Protection of Sensitive Information

Objective Weight = 20%

Numerical score = 3.2 Grade = B+

Although there were three laptops that were missing or lost during the FY, SLAC had no events involving the loss of sensitive information or the Personally Identifiable Information (PII).

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
<b>8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM)</b>					
8.1 Provide an Efficient and Effective Emergency Management System	C	1.9	30%	0.57	
8.2 Provide an Efficient and Effective System for Cyber-Security	B+	3.1	40%	1.24	
8.3 Provide an Efficient and Effective System for the Protection of Special Nuclear Materials, and SLAC Property	B+	3.4	10%	0.34	
8.4 Provide an Efficient and Effective System for the Protection of Sensitive Information	B+	3.2	20%	0.64	
<b>Performance Goal 8.0 Total</b>					<b>2.8</b>

Table 8.1 – 8.0 Goal Performance Rating Development



Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

**Table 8.2 – 8.0 Goal Final Letter Grade**

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## Laboratory Year-End Performance Assessment Report

Date:  
11/7/2008

Headquarters Program Office Fiscal Year 2008 Evaluation of Stanford University  
for Management and Operation of the SLAC

Agency:  
U.S. Department of Energy

Program Office:  
Office of Basic Energy Sciences (BES)

FY Funding Level: (Budget Authority)

Evaluator:

Phone Number:

E-mail Address:

### Goal 1.0 Provide for Efficient and Effective Mission Accomplishment

Goal Score: 3.84

Goal Grade: A

#### Goal 1.0 Performance Summary Statement:

BES research programs at SLAC produce high-quality scientific outputs that advance the frontiers in correlated electron systems; superconductivity, magnetism research, and in ultrafast atomic and molecular dynamics; the researchers receive prestigious external recognitions of their accomplishments. The Stanford Institute for Materials and Energy Science (SIMES) and Photon Ultrafast Laser Science and Engineering (PULSE) centers continue to fulfill a very important DOE mission in performing outstanding science-driven x-ray scattering and ultrafast research, respectively.

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Weighting: 50

Score: 3.9

Grade: A

Objective 1.1 Performance Summary Statement:

The Stanford Institute for Materials and Energy Science (SIMES) and Photon Ultrafast Laser Science and Engineering (PULSE) centers continue to fulfill a very important DOE mission in performing outstanding science-driven x-ray scattering and ultrafast research, respectively. Programs supported under the SIMES and PULSE Centers by the BES Condensed Matter Physics and Materials Chemistry programs were not reviewed in FY 2008. These programs continue to make progress in the areas of nanostructures, high temperature superconductors and strongly correlated electron systems, energy conversion phenomena, and other basic research related to energy applications. Of particular note was the SIMES and PULSE contribution to the development and exploitation of new instrumentation and techniques including photoemission spectroscopy, coherent x-ray imaging, inelastic x-ray scattering, and THz spectroscopy.

The management and strategic planning for the SLAC Photon Ultrafast Laser Science and Engineering (PULSE) center was assessed in an on-site review in June 2008. The PULSE center is jointly supported by the CSGB Division and the MSE Division, and it fulfills a very important DOE mission in performing grand-challenge research in ultrafast science, with a particular focus on anticipating and enhancing science to be done at the Linac Coherent Light Source (LCLS). While the science activities were not the direct subject of the FY 2008 review, the ongoing science within PULSE was innovative, highly visible, and had the potential to meaningfully impact the field of ultrafast science.

Objective 1.2 Provide Quality Leadership in Science and Technology

Score: 3.9

Grade: A

Weighting: 20

Objective 1.2 Performance Summary Statement:

The research projects supported at SLAC by the MSE Division that were world leading are those in correlated electron systems, nanomagnetism, ultrafast science, and materials synthesis as evidenced by the latest program and mail reviews and results published in the scientific literature. Recent hires in the area of ultrafast condensed matter science and the development of laboratory scale x-ray sources ensure the leadership in the programs in the aforementioned fields and in other energy relevant areas.

The PULSE Director is a preeminent scientist in the international physics community, noted for his leadership in the investigation of ultrafast x-ray interactions with atoms, molecules, and materials. He was assembling a world class team of co-principal investigators and collaborators at PULSE.

Objective 1.3 Provide and Sustain Outputs that Advance Program Objectives and Goals

Score: 3.7

Grade: A-

Weighting: 15

Objective 1.3 Performance Summary Statement:

The research supported by the MSE Division at SLAC produced high quality publications in prestigious journals in the areas of photoemission studies of HiTc superconductors, particularly the investigation of iron oxypnictides, x-ray scattering of magnetic materials, ultrafast science, and discovery of complex oxides and rare earth compounds with novel properties.

The quantity and quality of CSGB Division supported research outputs in peer-reviewed journals were fully acceptable by peer review.

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**Objective 1.4 Provide for Effective Delivery of Products**

Score: 3.7

Grade: A-

Weighting: 15

**Objective 1.4 Performance Summary Statement:**

The activities supported by the MSE Division were effective in transmitting the results to the community and in meeting the goals and milestones of the program.

CSGB Division supported research programs effectively and efficiently met scientific objectives and milestones, as measured by peer review; the programs were responsive to requests from BES for information and research highlights.

**Goal 2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operation of Research Facilities**

Goal Score: 3.58

Goal Grade: A-

**Goal 2.0 Performance Summary Statement:**

Stanford Synchrotron Radiation Laboratory (SSRL) continues to excel in its user support, and operates with high reliability after the SPEAR3 upgrade. Significant progress has been made in the LCLS and PULSE construction and the LUSI instrumentation projects. SLAC management has demonstrated effective leadership and responsiveness to project needs, ensuring adequate personnel and organizational support, and appropriate attention to budgetary details.

**Objective 2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs (i.e., activities leading up to CD-2)**

Score: 3.5

Grade: A-

Weighting: 10

**Objective 2.1 Performance Summary Statement:**

During FY 2008, SLAC succeeded in advancing the LCLS Ultrafast Science Instruments (LUSI) project to develop a mature baseline and to defend it successfully to an Office of Project Assessment review team in August 2008, whose report recommended CD-2. In so doing, SLAC showed responsiveness to project needs, e.g., making personnel and organizational changes, and conducting "Red Team" preparatory reviews.

Also during FY 2008, SLAC advanced the PULSE building renovation project through CD-1, CD-2A, and CD-3A milestones. In so doing, SLAC showed responsiveness to project needs, e.g., developing mature interfaces between the project and the SLAC facility support organizations, expediting procurement of a construction subcontractor, and replacing a part-time Project Engineer.

**Objective 2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components (execution phase, Post CD-2 to CD-4)**

Score: 3.5

Grade: A-

Weighting: 60



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**Objective 2.2 Performance Summary Statement:**

In FY 2008, SLAC made great progress in the LCLS project, finishing tunneling work, most of the rest of conventional construction, and beginning the installation of girder assemblies in the undulator hall. The project supported an External Independent Review (EIR) team visit that contributed toward a January 2008 rebaselining decision by the Department's Deputy Secretary. The project supported Office of Engineering and Construction Management (OECM) interactions that led to the successful certification of SLAC's Earned Value Management System (EVMS) in July 2008. However, a rash of safety incidents plagued this project, despite SLAC efforts to promote safety awareness and oversight; SLAC continues to address this issue.

**Objective 2.3 Provide Efficient and Effective Operation of Facilities**

Score: 3.7

Grade: A-

Weighting: 20

**Objective 2.3 Performance Summary Statement:**

The BES Scientific User Facility Division held a triennial operations review of the SLAC Synchrotron Radiation Lightsource (SSRL) on January 29-31, 2008. SSRL continues to excel in its user support. It also operates with high reliability after the SPEAR3 upgrade. In FY 2008, SSRL operated for 5027 hours with a reliability of 97.1 %. There were a total of 1147 unique users which included 215 remote users. SSRL and SLAC management addressed the issues raised during the review, including the creation of a laboratory directed research and development (LDRD) program at SLAC, clarification of the SSRL Scientific Advisory Committee members' roles as distinct from those of the SSRL Proposal Review Panel, and allocation of personnel to implement a web-based proposal system. SSRL effectively engaged its user community and staff in strategic planning.

**Objective 2.4 Utilization of Facilities to Grow and Support Lab's Research Base and External User Community**

Score: 3.9

Grade: A

Weighting: 10

**Objective 2.4 Performance Summary Statement:**

SSRL continues to be a key facility for Stanford campus research and for the external user community.

**Goal 3.0 Provide Effective and Efficient Science and Technology Program Management**

Goal Score: 3.35

Goal Grade: B+

**Goal 3.0 Performance Summary Statement:**

The SLAC management provided effective program vision and leadership; and was successful in recruiting and retaining high quality scientific staff. The SLAC Photon Sciences Division, within which the BES research programs are housed, is a concept that is still under development. The formation of SIMES and PULSE will help to ensure SLAC's leadership in scattering and ultrafast



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sciences.

**Objective 3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision**

Score: 3.5

Grade: A-

Weighting: 40

**Objective 3.1 Performance Summary Statement:**

SLAC's stewardship of strategic research areas in materials research, particularly those coupled to SSRL and the LCLS capabilities continued to evolve. Their efforts in photoemission spectroscopy, x-ray microscopy, coherent lensless imaging, and time-dependent x-ray imaging are viewed as the best in the world. The formation of the SIMES and PULSE centers have created a critical mass in BES-centric competencies and are helping to ensure SLAC's leadership in x-ray and ultrafast science. The SIMES and PULSE Directors provided strong vision and leadership for the laboratory's research efforts in materials sciences and ultrafast science. The recruitment of world-class researchers into the program continued to be a strength of both centers.

The FY 2008 management review affirmed that the majority of the scientific projects within PULSE were well managed, held significant potential for scientific leadership and impact, and exhibited a positive path toward success. The overall PULSE program was synergistic, multidisciplinary, and served to address a number of DOE mission-relevant science areas. The PULSE Center has a vision to develop, implement, and promote science on the LCLS. This vision was effective in broadly connecting LCLS to the BES scientific communities, was valued as SLAC evolves into a multi-purpose laboratory, and was validated by PULSE's recruitment of world-leading scientists. However, also noted was the room for improvement in both the alignment of BES-funded PULSE projects with BES objectives and mission relevance and for increased synergy among BES-funded projects within PULSE.

**Objective 3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management**

Score: 3.1

Grade: B+

Weighting: 30

**Objective 3.2 Performance Summary Statement:**

SLAC's planning and management was in a transitional stage. The overall structure of the laboratory programs supported by the MSE Division, along with management and budgetary details of the Photon Sciences division within which the programs would be housed, is a concept that is developing. The SIMES center was requested to reorganize and rearticulate its scientific thrust areas in order to fashion the program into a truly synergistic endeavor. The SIMES program will be reviewed in early FY 2009, and the efficacy of this reorganization in producing optimal impact and compelling research thrust areas will be assessed at that time. A management review of the PULSE center was conducted in FY 2008. Highlighted in the review findings were the reviewers' concerns surrounding: (1) the delineation of primary BES mission drivers underpinning some of the Center's strategic goals and growth plans; (2) the strategic hiring process; and (3) the Center's line management and reporting structure. Continued laboratory management attention is required to positively affect these strategic management elements.

PULSE and SLAC management were highly successful in recruiting researchers and effective at addressing staff performance issues. The dual reporting structure of PULSE (to SLAC and to Stanford

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University) and the multiple types of PULSE staffing positions present opportunities and challenges. In a positive sense, this structure was beneficial as an attractor of excellent scientists to joint appointments between SLAC and Stanford. However, as noted in the FY 2008 management review, this complex management structure may create gaps associated with the lack of commitment of associated faculty researchers to PULSE program coherence and performance over the long term, hinder the attention to career development of both faculty and staff, and impede the execution of core responsibilities.

In the FY 2008 management review, SLAC's management of BES funding for PULSE activities, i.e., clearly connecting funding sources and effort levels to subtasks, was greatly improved over previous practices. BES expects SLAC to continue and to increase its diligent accounting and transparent reporting of all personnel working or receiving support for all BES-supported subtasks in PULSE, both currently and in future spending plans.

**Objective 3.3 Provide Efficient and Effective Communications and Responsiveness to Customer Needs**

Score: 3.4

Grade: B+

Weighting: 30

**Objective 3.3 Performance Summary Statement:**

BES communications with SLAC management were open and usually effective. A continued refinement of the roles and responsibilities of members of the Photon Sciences Directorate is required to improve communications with BES. Communications between PULSE management and BES were open, frequent, effective, and along properly defined lines.

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## Laboratory Year-End Performance Assessment Report

Date:

11/3/2008

Headquarters Program Office Fiscal Year 2008 Evaluation of Stanford University  
for Management and Operation of the SLAC

Agency:

U.S. Department of Energy

Program Office:

Office of Biological and Environmental Research (BER)

FY Funding Level: (Budget Authority)

Evaluator:

Phone Number:

E-mail Address:

Goal 1.0 Provide for Efficient and Effective Mission Accomplishment

Goal Score: 3.97

Goal Grade: A

Goal 1.0 Performance Summary Statement:

The quality and quantity of publications from the Structural Molecular Biology Program continues to be outstanding with more than 200 peer-reviewed journal publications from the program and its user community in FY 2008.

SSRL/SLAC continue to provide scientific leadership, productivity, and innovation in structural biology and the relatively new field of subsurface biogeochemistry. SSRL/SLAC continues to lead in enabling high-impact research using all of the applicable synchrotron techniques and the staff are internationally recognized for their technical and scientific expertise and contributions to science.

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**Objective 1.1 Science and Technology Results Provide Meaningful Impact on the Field**

Score: 4.0

Grade: A

Weighting: 30

**Objective 1.1 Performance Summary Statement:**

The Structural Molecular Biology (SMB) program at SSRL continues to lead in enabling high-impact research using all of the applicable synchrotron techniques: macromolecular crystallography (MC), small-angle x-ray scattering (SAXS) and x-ray spectroscopy (XAS). The SMB staff continue to provide state-of-the art new technology that changes how scientists carry out synchrotron experiments: noteworthy in this regard is that in FY 2008 more than 75% of MC users carry out their experiments using SSRL's innovative remote access system.

The Environmental Remediation Science Program (ERSP) funded research at SLAC has produced significant publications during FY 2008, with impact on the world wide community in the field.

**Objective 1.2 Provide Quality Leadership in Science and Technology**

Score: 4.1

Grade: A+

Weighting: 20

**Objective 1.2 Performance Summary Statement:**

The SMB program at SSRL is a world leader in developing new directions for the field. The senior staff for MC, SAXS and XAS are all internationally recognized for their accomplishments and expertise, and are frequently called upon to serve on advisory panels around the world for developing policies for synchrotron light sources and for the biological and chemical sciences. These scientists have long-term commitments to the laboratory, resulting in a highly stable staff, which in turn enables the SMB program to attract leader outside scientists as collaborators in forefront areas of the field.

The staff of the ERSP research program at SLAC is demonstrating leadership in addressing difficult problems that could have major payoffs in understanding of subsurface biogeochemistry. The program includes several highly-regarded scientists from outside institutions who bring unique capabilities to the program. Stanford University scientists with outstanding reputations internationally are also heavily involved in the program.

**Objective 1.3 Provide and Sustain Outputs that Advance Program Objectives and Goals**

Score: 3.9

Grade: A

Weighting: 20

**Objective 1.3 Performance Summary Statement:**

The publication record of the SMB program continues to be outstanding. More than 200 peer-reviewed journal publications came from the program and its user community in FY 2008. The quality of these publications is truly extraordinary: about 40% are in these six international leadership journals: *Science*, *Nature*, *Cell*, *Proceedings of the National Academy of Sciences (USA)*, *Journal of Biological Chemistry* and *Journal of the American Chemical Society*.

ERSP research at SLAC continues to produce significant numbers of publications in major journals. Technical reporting is outstanding, and the program has been highly responsive to guidance provided by BER in response to these reports.



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**Objective 1.4 Provide for Effective Delivery of Products**

Score: 3.9

Grade: A

Weighting: 30

**Objective 1.4 Performance Summary Statement:**

The SMB program staff continues to bring new instrumentation on line on or ahead of schedule, and to make the new technologies available to external collaborators and users. The completely upgraded beamline 4-2 was commissioned in FY 2008 in its new location, including a new detector and a higher beam flux than before. Other improvements were made in the XAS and MC beamlines at or under budget. The new beamline 12-2 for MC, funded by the Moore Foundation, was made available ahead of schedule to several general user groups in FY 2008.

The ERSP program has been outstanding in meeting goals established in its proposals and reports, and consistently exceeds BER expectations.

**Goal 2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operation of Research Facilities**

Goal Score: 4.10

Goal Grade: A+

**Goal 2.0 Performance Summary Statement:**

A new beamline, funded by the Moore Foundation, offers a unique microfocus capability for studying very small crystals, a capability that is not available elsewhere in the country and that is critical for experiments on large, complex cellular machines

The Structural Molecular Biology program has an outstanding record of providing high quality service to users in addition to developing and providing innovations to enable experiments to be carried out more rapidly. They have highly productive interactions and collaborations with external users and external funding organizations that maximize the utility and productivity of their user resources.

**Objective 2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs (i.e., activities leading up to CD-2)**

Score: NA

Grade: NA

Weighting: 0

**Objective 2.1 Performance Summary Statement:**

**Objective 2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components (execution phase, Post CD-2 to CD-4)**

Score: NA

Grade: NA

Weighting: 0

**Objective 2.2 Performance Summary Statement:**

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**Objective 2.3 Provide Efficient and Effective Operation of Facilities**

Score: 4.1

Grade: A+

Weighting: 90

**Objective 2.3 Performance Summary Statement:**

The SMB staff has an outstanding record of operating the many types of beamlines for which the program is responsible. This is demonstrated by the increasing numbers of users they are serving, but more importantly by the innovations put in place to enable experiments to be carried out more rapidly, such as the SAXS beamline upgrade that will shorten data collection for protein solution scattering by a factor of five, and the Stanford Auto-Mounter, which now is used by more than 80% of the MC users, resulting in more experiments being completed in a user shift with fewer samples lost to damage in manual handling.

**Objective 2.4 Utilization of Facilities to Grow and Support Lab's Research Base and External User Community**

Score: 4.1

Grade: A+

Weighting: 10

**Objective 2.4 Performance Summary Statement:**

The SMB program at SSRL has an outstanding record of attracting an external user community of leading scientists in all aspects of biological research. The staff have demonstrated national leadership in implementing new technologies that support forefront research. Noteworthy in FY 2008 was the commissioning of beamline 12-2, funded by the Moore Foundation. This beamline offers a unique microfocus capability for studying very small crystals, a capability that is not available elsewhere in the country and is critical for experiments on large, complex cellular machines. These developments have also meant that the laboratory is able to attract and retain outstanding scientists. The fact that many of the publications of external users include SMB staff as co-authors is evidence of the high quality of the local research base.

**Goal 3.0 Provide Effective and Efficient Science and Technology Program Management**

Goal Score: 4.05

Goal Grade: A+

Grade.

**Goal 3.0 Performance Summary Statement:**

The SMB program management has an excellent record of planning for the current and future needs of the research community it serves.

SSRL/SLAC leadership provide excellent and highly effective management. They maintain regular, productive lines of communication with BER staff to report successes and proactively address issues that arise. SMB program leadership is outstanding in developing a long-term vision for the program that anticipates improvements in the capabilities of the light source and has instrumentation ready to take full advantage of these improvements. They have also done an outstanding job of leveraging DOE resources to attract external funds that benefit the user community.



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**Objective 3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision**

Score: 4.0

Grade: A

Weighting: 20

**Objective 3.1 Performance Summary Statement:**

The SMB leadership is outstanding in developing a long-term vision for the program that anticipates improvements in the capabilities of the light source and has instrumentation ready to take full advantage of these improvements. The development and commissioning of beamline 12-2 for MC in FY 2008 is an example of this; the major upgrading of beamline 4-2 for SAXS completed in FY 2008 is another. In both cases these improvements make full use of the SPEAR 3 capabilities and at the same time provide unique experimental facilities that are now of increasing importance for biological research. The leadership is planning effectively for the future: this was demonstrated for each of the areas at the meeting of the Advisory Committee for the SMB program in July 2008.

All of the subprojects in the ERSP-funded program at SLAC show a strong long-term vision of what can best be accomplished by making highly effective use of several types of beamlines at SSRL to advance the fundamental science agenda in this area of environmental sciences research.

**Objective 3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management**

Score: 4.0

Grade: A

Weighting: 30

**Objective 3.2 Performance Summary Statement:**

The SMB program management has an excellent record of planning for the needs of the community it serves. They have consistently developed research plans that avoid potential difficulties and minimize risks. DOE-BER funding is leveraged by funding from NIH and from private sources, reducing dependence on any one agency. Guidance from the advisory committee and SSRL's user organization is used effectively by the SMB staff.

BER carried out planning for ERSP-funded science during FY 2008 and the response from SLAC was outstanding. The Principal Investigator (PI) developed a high relevant program plan that got uniformly high ratings from an external merit review panel. The PI included two funded external investigators, both of whom make significant contributions to the research program, and integrated their subprojects effectively into the research taking place at SLAC.

**Objective 3.3 Provide Efficient and Effective Communications and Responsiveness to Customer Needs**

Score: 4.1

Grade: A+

Weighting: 50

**Objective 3.3 Performance Summary Statement:**

The SMB program management has an outstanding record for communicating with BER staff. There is frequent communication about progress in implementing new technology and about major scientific results. SMB staff also promptly respond to requests for detailed information about the user collaboration and service programs. The reports are accurate and complete. BER staff are always able to reach the Principal Investigator and the leaders of the MC, SAX and SAXS programs when

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questions arise at Headquarters.

The ERSP-funded program at SLAC was developed with extensive discussions between the PI and the ERSP staff. The PI responded positively to recommendations from BER, even when they required a shift in plans. The ERSP had previously funded a mixture of research and user support, and the new program required a substantial reorientation of the program to one in which the PI's research was the primary focus. New developments in the program are reported regularly to BER, as well as opportunities for incremental changes in approach. ERSP staff carried out a site visit in July at which the PI and scientists associated with the project, including the two outside investigators, provided a clear and complete presentation on the project.

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## Laboratory Year-End Performance Assessment Report

Date:  
11/17/2008

Headquarters Program Office Fiscal Year 2008 Evaluation of Stanford University  
for Management and Operation of the SLAC

Agency:  
U.S. Department of Energy

Program Office:  
Office of High Energy Physics (HEP)

FY Funding Level: (Budget Authority)

Evaluator:

Phone Number:

E-mail Address:

### Goal 1.0 Provide for Efficient and Effective Mission Accomplishment

Goal Score: 3.71

Goal Grade: A-

#### Goal 1.0 Performance Summary Statement:

The Stanford Linear Accelerator Center (SLAC) has high energy physics programs focused on the analysis of data accumulated at the B-factory, a space-based astroparticle physics experiment (Fermi-GLAST), the ATLAS detector at the LHC, a number of initiatives for non-accelerator based experiments, theoretical physics in particle and particle-astrophysics, and an advanced accelerator research program.

The reduced B-Factory running schedule in FY 2008 (from 10 months to 4 months) was successfully used by the BaBar collaboration to maximize the physics results by focusing on the 2S and 3S states of bottomium. The lab is committed to a 2-3 year program of intense analysis of all the data taken at the B-Factory. PEP-II and BaBar are now entering their D&D phase. Planning for this phase was started

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in FY2007 and a revised plan will be reviewed in March 2009. A highlight of FY2008 was the successful launch of the Fermi-GLAST satellite in June, 2008. The Fermi-GLAST Instrument Science Operations Center, ISOC, at SLAC is actively accumulating and analyzing data.

SLAC has mounted an aggressive effort to become a major institution in the U.S. ATLAS collaboration. Since joining in FY 2007, SLAC has become a Tier-2 computer site for LHC data analysis and is partnering with University of California-Santa Cruz and LBNL to become a west coast hub for the ATLAS community. SLAC also participating in the LHC accelerator research program (LARP). The lab plans to participate in analysis of Fermi-GLAST data and to have significant involvements in the proposed Joint Dark Energy Mission and Large Synoptic Survey Telescope (LSST) experiments. It is developing a plan for a long range program that can retain its acknowledged leadership in many areas of accelerator R&D.

**Objective 1.1 Science and Technology Results Provide Meaningful Impact on the Field**

Score: 3.8

Grade: A

Weighting: 30

**Objective 1.1 Performance Summary Statement:**

With the end of operations in April, 2008, BaBar entered a period of intense analysis of its full data set. It continues to focus on a comprehensive set of measurements for CP-violating asymmetries, a systematic exploration of rare decay processes, and detailed studies to elucidate the dynamics of processes involving heavy quarks. Its accurate, high precision studies test the limitations of the Standard Model, and constrain possible new physics discoveries at the LHC.

The Fermi-GLAST satellite is functioning well and data is being turned into science products and analyzed at SLAC's ISOC.

The SLAC Theory group was rated as outstanding in a comparative lab review held at the DOE in September, 2008. The particle astrophysics theory group, supported as part of the SLAC/Stanford Kavli Institute, was also thought to be producing top-notch research in astrophysics, but its relevance to HEP missions was strongly questioned.

**Objective 1.2 Provide Quality Leadership in Science and Technology**

Score: 3.5

Grade: A-

Weighting: 30

**Objective 1.2 Performance Summary Statement:**

The Kavli Institute for Particle Astrophysics and Cosmology (KIPAC), headed by \_\_\_\_\_, completed its fifth full academic year and strengthened SLAC's impact on particle astrophysics research. The scientific program at KIPAC is diverse, ranging from traditional astrophysics topics to investigations of dark matter and energy that are of interest to HEP. The LSST R&D program is a major initiative for several KIPAC faculty members. The DOE funded portion of LSST will focus on dark energy and dark matter investigations.

\_\_\_\_\_ is leading the Accelerator R&D efforts at SLAC, which have been reorganized under his guidance. SLAC contributes significantly to the scaled-back national ILC effort, focusing on development of critical technologies such as klystrons and solid-state modulators. SLAC is also engaged

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in design and test of high gradient structures, examination of final-focus requirements, and an aggressive R&D program in the NLCTA program which may be relevant to the next generation electron based accelerator.

**Objective 1.3 Provide and Sustain Outputs that Advance Program Objectives and Goals**

Score: 3.8

Grade: A

Weighting: 30

**Objective 1.3 Performance Summary Statement:**

Babar has produced over 350 publications since 1999, with more than 40 of those appearing during FY2008. At ICHEP2008, the BaBar collaboration contributed 130 abstracts and 6 invited talks on a full spectrum of new results. A highlight was BaBar's recent discovery of the ground state of the bottomium system, the  $\eta_b$ . There are more than 200 students and post-docs using the BaBar data for their research. Over 200 Ph. D.'s have resulted from this research and over 300 post-docs have been trained at BaBar.

The Fermi-Glast satellite is functioning well and data is being analyzed at SLAC's ISOC.

**Objective 1.4 Provide for Effective Delivery of Products**

Score: 3.8

Grade: A

Weighting: 10

**Objective 1.4 Performance Summary Statement:**

BaBar is now engaged in mining the data that the B-Factory accumulated over its nine year lifetime. An "intense analysis" period is scheduled to continue for 2-3 years.

NASA is operating its Fermi-GLAST satellite, and SLAC operates the ISOC which provides the observing plan for Fermi and analyzes the received data and produces science products. First results based on several days of engineering data have already produced an all sky map of gamma rays that is comparable to multi-year results from the previous gamma ray mission, EGRET.

**Goal 2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operation of Research Facilities**

Goal Score: 3.72

Goal Grade: A-

**Goal 2.0 Performance Summary Statement:**

The B-Factory was terminated after a four month run in April, 2008. The shortened run was planned by the BaBar collaboration to optimize physics output and was extremely successful. It achieved  $57.2 \text{ fb}^{-1}$  of integrated luminosity, which exceeded its goal for the four month run by more than a factor of two. BaBar data is being analyzed and will be mined for several more years using the SLAC Computing Services facilities.



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The Fermi-Glast satellite is functioning well and data is being analyzed at SLAC's ISOC.

**Objective 2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs (i.e., activities leading up to CD-2)**

Score: 3.4

Grade: B+

Weighting: 20

**Objective 2.1 Performance Summary Statement:**

The FACET proposal to develop a beam driven plasma-wakefield experimental facility in sector 20 of the SLAC linac, is under review by the OHEP. The proposal passed a scientific review in 2008 and was reviewed relative to the BELLA proposal for a laser-driven plasma-wakefield facility at LBNL in July, 2008.

EXO-200, designed to confirm or refute the Majorana nature of the neutrino and estimate its mass, is well underway at Waste Isolation Pilot Plant in New Mexico. If this prototype experiment is successful, SLAC may get involved in the full EXO experiment.

The LSST R&D project, a major initiative for several KIPAC faculty members, will focus in part on dark energy and dark matter investigations. The design and construction of the camera may become a DOE project if the R&D efforts are successful and review well. The lead funding agency for the LSST is the NSF, with the DOE support limited to the camera and its electronics. The next crucial step for the LSST and its possible move from the R&D to the project stage is its ranking in the upcoming Decadal Survey conducted by the National Academies of Science.

**Objective 2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components (execution phase, Post CD-2 to CD-4)**

Score: 0.0

Grade: NA

Weighting: 0

**Objective 2.2 Performance Summary Statement:**

**Objective 2.3 Provide Efficient and Effective Operation of Facilities**

Score: 3.8

Grade: A

Weighting: 80

**Objective 2.3 Performance Summary Statement:**

SLAC's B-Factory performance was very successful in FY2008. The FY2008 run 7 was reduced from ten months to four due to the FY2008 budget shortfall. The B-Factory exceeded the DOE FY2008 luminosity goal by a factor of two.

The launch of the Fermi-Glast satellite in June, 2008, was successful and the turn-on and subsequent operation of the telescope was nominal. SLAC is receiving and analyzing data in their Instrument Science Operations Center (ISOC).



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personnel in the field. The FACET proposal has been retooled extensively and repeatedly to address concerns of OHEP and reviewers. The plan for supporting key pieces of the accelerator R&D infrastructure (eg klystron dept) has also been slow to develop.

SLAC's major HEP effort is their participation in the ATLAS collaboration and related activities, such as the Tier-2 center and their plan to be an intellectual west coast center for LHC physics. Their growth plans in this area are aggressive and their coordination with other components of the US ATLAS collaboration is essential.

SLAC plans to further develop its efforts in particle astrophysics. The Fermi-GLAST satellite and its ISOC have been impressive successes to date. SLAC is dependent on the development of the LSST effort from R&D to the project stage to have a real impact that will sustain a portion of the lab in the long run.

### **Objective 3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management**

Score: 3.6

Grade: A-

Weighting: 40

#### **Objective 3.2 Performance Summary Statement:**

SLAC managed the abrupt termination of the B-Factory well and accomplished considerable physics research in its four month run 7. The lab also developed a thoughtful plan to manage the RIF's required to deal with the FY2008 budget shortfall.

The lab is beginning the D&D of BaBar and is planning D&D activities for PEP-II while it is maintained in a "minimal maintenance state".

Fermi-GLAST and its ISOC are well managed and are on track. LSST R&D on the facility's camera and electronics is progressing but the long term future of this effort has not been decided.

SLAC's involvement in the ATLAS project is under review. SLAC has proposed a user support center structured around its LHC Tier-2 computing center.

The lab's vision of its future may not be aligned well with the national program . The OHEP and the lab are in conversations to determine if the priorities of the field and the resources available to support them are compatible with the lab's goals and ambitions.

### **Objective 3.3 Provide Efficient and Effective Communications and Responsiveness to Customer Needs**

Score: 3.2

Grade: B+

Weighting: 20

#### **Objective 3.3 Performance Summary Statement:**

Management communicates regularly with the OHEP. The lab's budget is particularly complicated and the lab is working to map it more clearly onto the structure preferred by the OHEP. These challenges are particularly serious as the lab makes its transition to a multi-disciplinary facility.

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**Objective 2.4 Utilization of Facilities to Grow and Support Lab's Research Base and External User Community :**

Score: 0.0

Grade: NA

Weighting: 0

**Objective 2.4 Performance Summary Statement:**

**Goal 3.0 Provide Effective and Efficient Science and Technology Program Management**

Goal Score: 3.48

Goal Grade: A-

**Goal 3.0 Performance Summary Statement:**

SLAC management did a very good job in dealing with the abrupt reduction in funding FY 2008. SLAC managed the abrupt termination of the B-Factory well and accomplished considerable physics research in its four month run 7. The lab also developed a thoughtful plan to manage the RIF's required to deal with the FY2008 budget shortfall.

SLAC has reorganized and presented its plan for transitioning from an institute centered around a HEP user facility to one centered around a BES user facility. SLAC's HEP plan has three major components for efforts at the energy frontier, at the cosmic frontier and in accelerator R&D. All of these proposed efforts have obstacles that must be addressed. It strives to be a growing player in the US ATLAS collaboration of the LHC, but this effort needs to fit into the U.S. ATLAS collaboration and address national needs. NASA's Fermi-GLAST satellite is operating and producing data. Its R&D efforts on LSST are crucial for the success of that effort, but the decision to move forward with that project is still pending. SLAC continues to lead world class research efforts in new accelerator concepts and has in-house unique capabilities for accelerator studies, however, it plans need to be compatible with the priorities of the national program and funding limitations may prevent the utilization of the unique research capabilities at SLAC. SLAC's overall plan for HEP is considered to have significant merit, but as indicated above there are programmatic and funding issues that need to be addressed.

**Objective 3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision**

Score: 3.4

Grade: B+

Weighting: 40

**Objective 3.1 Performance Summary Statement:**

SLAC is reshaping their Particle and Particle Astrophysics (PPA) organization to reflect the transition of the lab to a multi-disciplinary facility. They are reorganizing their diverse set of accelerator R&D efforts under one division headed by Tor Rubenheimer. It will be a major lab challenge to accomplish this and achieve their goal of remaining a major high energy physics facility.

The FACET effort plays an important role in the lab's reorganization and vision. Without an operating accelerator, the lab will depend on FACET's success to remain at the forefront of accelerator research and to keep the high energy physics community involved with SLAC. FACET is also essential to retain key

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## Laboratory Year-End Performance Assessment Report

Date:  
11/3/2008

Headquarters Program Office Fiscal Year 2007 Evaluation of Stanford University  
for Management and Operation of the SLAC

Agency:  
U.S. Department of Energy

Program Office:  
Workforce Development for Teachers and Scientists (WDTS)

FY Funding Level: (Budget Authority)

Evaluator:

Phone Number:

E-mail Address:

### Goal 1.0 Provide for Efficient and Effective Mission Accomplishment

Goal Score: 3.21

Goal Grade: B+

#### Goal 1.0 Performance Summary Statement:

The WDTS program is exceptionally well managed and fully supported throughout the laboratory. Students and educators are placed in challenging research positions where their scientific talents and interests are well matched with what is expected of them. The staff in the education office is very involved with students/educators as well as the mentors ensuring that the collaboration is productive, projects are well defined, and identify any issues to resolve. Direct dialog between education program managers, division directors, mentors ensures that all interactions have at the core a commitment to the science learning.

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**Objective 1.1 Science and Technology Results Provide Meaningful Impact on the Field**

Score: 3.0

Grade: B

Weighting: 25

**Objective 1.1 Performance Summary Statement:**

- SLAC has a long-standing, well established mentor culture within the lab and they continue to advance that culture. The success of the undergraduate internship program funded by WDTS is based on the careful attention given to matching mentors and students.
- Mentors are pleased to have WDTS interns because the education staff manages the placements and mentor mentee experience to the greatest advantage of both.

**Objective 1.2 Provide Quality Leadership in Science and Technology**

Score: 3.2

Grade: B+

Weighting: 30

**Objective 1.2 Performance Summary Statement:**

- Students are placed in challenging research environments and are carefully guided to a productive outcome.
- Student products and outputs are always of excellent quality as validated by science educator review and headquarters annual self-evaluation.

**Objective 1.3 Provide and Sustain Outputs that Advance Program Objectives and Goals**

Score: 3.3

Grade: B+

Weighting: 30

**Objective 1.3 Performance Summary Statement:**

- Undergraduate interns and educators at SLAC are fully integrated into the lab operation and gain significant research capability but are placed on equal footing with other laboratory researchers and benefit from that immersion experience.

**Objective 1.4 Provide for Effective Delivery of Products**

Score: 3.4

Grade: B+

Weighting: 15

**Objective 1.4 Performance Summary Statement:**

- SLAC does an excellent job in matching interns/educators with research experiences where their talent is at a level of competency where they can substantially contribute to the research. The education office is very effective in providing resources required to ensure that the intern and the PI equally benefit from the collaboration.
- Mentors are very willing to host intern/educators as a result of the reputation and dependability of the education office.

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**Goal 2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operation of Research Facilities**

Goal Score: 0.00

Goal Grade: NA

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**Goal 2.0 Performance Summary Statement:**

**Objective 2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs  
(i.e., activities leading up to CD-2)**

Score: NA

Grade: NA

Weighting: 0

**Objective 2.1 Performance Summary Statement:**

**Objective 2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication  
of Components (execution phase, Post CD-2 to CD-4)**

Score: NA

Grade: NA

Weighting: 0

**Objective 2.2 Performance Summary Statement:**

**Objective 2.3 Provide Efficient and Effective Operation of Facilities**

Score: NA

Grade: NA

Weighting: 0

**Objective 2.3 Performance Summary Statement:**

**Objective 2.4 Utilization of Facilities to Grow and Support Lab's Research Base and External  
User Community**

Score: NA

Grade: NA

Weighting: 0

**Objective 2.4 Performance Summary Statement:**



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Goal Score: 3.30

Goal Grade: B+

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

**Goal 3.0 Performance Summary Statement:**

The education office has focused time and talent on operating as a well integrated team and the results demonstrate a significant increase in productivity where student outputs are of superior quality and the research experience is a rich, productive experience.

**Objective 3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision**

Score: 3.3

Grade: B+

Weighting: 20

**Objective 3.1 Performance Summary Statement:**

- SLAC uses a "selection committee" to review applications and assign placements to mentors and divisions. This process ensures that not only the best students are selected but to include students/educators for whom the opportunity will make a difference.
- SLAC, similar to a number of the other laboratories, places an emphasis on recruiting under-represented students into the program and this year successfully increased their percentage of diversity over previous years.

**Objective 3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management**

Score: 3.3

Grade: B+

Weighting: 40

**Objective 3.2 Performance Summary Statement:**

- SLAC is outstanding in their development and assessment of policies, procedures, and outcomes both for the intern/educator as well as the mentor and the research division.
- The education staff ensures that interns/educators gain a full appreciation for the depth and breadth of the research managed within the laboratory as well as the research and results performed at their facilities.
- The education office ensures that the mentor researcher are matched with well prepared, conscientious, students and as a result is provided with significant laboratory funding to support WDTS research interns.

**Objective 3.3 Provide Efficient and Effective Communications and Responsiveness to Customer Needs**

Score: 3.3

Grade: B+

Weighting: 40

**Objective 3.3 Performance Summary Statement:**

- Commitment to communication and an appreciation for science education enhanced by mentor research is a basic principle for operation within the laboratory. It is a quality that is impressed upon every participant and guides all interactions between mentor and mentee, as well the effective program relationship between WDTS and the education staff.
- SLAC is a key collaborator in extending the WDTS research internship model to pre-service



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teachers through the STAR program. Funded by Bechtel and in partnership with California State Universities, SLAC, LBNL, LLNL, and NASA, STAR supports 35 undergraduate preparing for a career in science education participate in laboratory research experience.

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